

CLAIMS

1. An antenna tower and support apparatus, comprising:
 - a) a foundation;
 - b) a multistory building mounted on the foundation, including a plurality of
5 vertically spaced apart building sections that include at least a bottom section and a top section;
 - c) a tower supported upon the top of the building;
 - d) a plurality of antennae attached to the tower;
 - e) a plurality of the building sections having a security area that is separate
10 from the security area of other building sections;
 - f) a plurality of antenna portals, at least one antenna portal being provided on each building section;
 - g) a plurality of antenna cables, each security area having a cable extending from an antenna to the security area via an antenna portal; and
15 h) a plurality of the security areas having telecommunication equipment that is connected respectively to one of said antenna cables.
2. The antenna tower and support apparatus of claim 1 wherein the tower is a self supporting tower.
3. The antenna tower and support apparatus of claim 1 wherein the tower is
20 a guyed tower.
4. The antenna tower and support apparatus of claim 1 wherein the tower is a monopole tower.
5. The antenna tower and support apparatus of claim 1 wherein the tower is a guyed tower that is guyed to the top of the building.
- 25 6. The antenna tower and support apparatus of claim 1 wherein at least one of the building sections has multiple antenna cables that enter its security area via an antenna portal.
7. The antenna tower and support apparatus of claim 1 wherein the multiple antenna include at least one microwave antenna.
- 30 8. The antenna tower and support apparatus of claim 1 wherein the multiple antennae include at least one whip antenna.

9. The antenna tower and support apparatus of claim 1 wherein the multiple antennae include at least one panel antenna.

10. The antenna tower and support apparatus of claim 1 wherein the multiple antenna include at least one microwave antenna and at least one panel antenna.

5 11. The antenna tower and support apparatus of claim 1 wherein the multiple antenna include at least one microwave antenna and at least one whip antenna.

12. The antenna tower and support apparatus of claim 1 wherein the multiple antenna include at least one whip antenna and at least one panel antenna.

10 13. The antenna tower and support apparatus of claim 1 further comprising a single ground ring grounded below the earth's surface next to the building.

14. The antenna tower and support apparatus of claim 13 wherein multiple of the building sections have connections to the ground ring.

15 15. The antenna tower and support apparatus of claim 14 wherein each building has electronic equipment that is grounded to the ground ring.

16. The antenna tower and support apparatus of claim 14 wherein each building has metallic equipment that is grounded to the ground ring.

17. An antenna tower and support apparatus, comprising:

a) a foundation;

20 b) a multilevel building mounted on the foundation, including a plurality of vertically spaced apart building sections, that include at least a bottom section and a top section, and a plurality of load bearing columns that span vertically from the bottom to the top;

c) a tower supported upon the top of the building;

d) a plurality of antenna attached to the tower;

25 e) a plurality of the building sections having a security area that is separate from the security area of other building sections;

f) a plurality of antenna portals provided on multiple of the building sections;

30 g) an antenna cable extending from an antenna to a security area via an antenna portal for a plurality of the building sections; and

h) a plurality of the security areas having telecommunication equipment that

is connected to an antenna cable.

18. The antenna tower and support apparatus of claim 15 wherein the columns each comprise connected together vertical column sections.

19. The antenna tower and support apparatus of claim 15 wherein the tower has tower legs, each leg of the tower supported by a column.

20. The antenna tower and support apparatus of claim 15 wherein the tower is a self supporting tower.

21. The antenna tower and support apparatus of claim 15 wherein the tower is a guyed tower.

22. The antenna tower and support apparatus of claim 15 wherein the tower is a monopole tower.

23. The antenna tower and support apparatus of claim 15 wherein at least one of the building sections has multiple antennae cable that enter its security area via an antennae portal.

24. The antenna tower and support apparatus of claim 15 wherein the multiple antennae include at least one microwave antenna.

25. The antenna tower and support apparatus of claim 15 wherein the multiple antennae include at least one whip antenna.

26. The antenna tower and support apparatus of claim 15 wherein the multiple antennae include at least one panel antenna.

27. The antenna tower and support apparatus of claim 15 wherein the multiple antennae include at least one microwave antenna and at least one panel antenna.

28. The antenna tower and support apparatus of claim 15 wherein the multiple antennae include at least one microwave antenna and at least one whip antenna.

29. The antenna tower and support apparatus of claim 15 wherein the multiple antennae include at least one whip antenna and at least one panel antenna.

30. The antenna tower and support apparatus of claim 15 further comprising a single ground ring grounded below the earth's surface next to the building.

31. The antenna tower and support apparatus of claim 30 wherein multiple of the building sections have connections to the ground ring.

32. An antenna tower and support apparatus, comprising:

a) a foundation;

b) a multistory building mounted on the foundation, including a plurality of vertically spaced apart building sections that include at least a bottom section positioned next to the foundation and a top section, each building section defining a separate floor of the multistory building;

c) an open tower supported upon the multistory building and above the top section, the tower comprising only exposed structural connecting members and not being covered, enabling wind load to be minimized;

d) a plurality of antennas attached to the tower at multiple elevational positions;

33. The antenna tower and support apparatus of claim 32 wherein the open tower is a self supporting tower.

36. The antenna tower and support apparatus of claim 32 wherein the open tower is a guyed tower that is guyed to the top of the building.

38. The antenna tower and support apparatus of claim 32 wherein the multiple antennas include at least one microwave antenna.

39. The antenna tower and support apparatus of claim 32 wherein the multiple antennas include at least one whip antenna.

40. The antenna tower and support apparatus of claim 32 wherein the multiple antennas include at least one panel antenna.

5 41. The antenna tower and support apparatus of claim 32 wherein the multiple antennas include at least one microwave antenna and at least one panel antenna.

42. The antenna tower and support apparatus of claim 32 wherein the multiple antennas include at least one microwave antenna and at least one whip antenna.

10 43. The antenna tower and support apparatus of claim 1 wherein the multiple antennas include at least one whip antenna and at least one panel antenna.

44. The antenna tower and support apparatus of claim 3 further comprising a single ground ring grounded below the earth's surface next to the building.

45. The antenna tower and support apparatus of claim 34 wherein multiple of the building sections have connections to the ground ring.

15 46. The antenna tower and support apparatus of claim 45 wherein each building has electronic equipment that is grounded to the ground ring.

47. The antenna tower and support apparatus of claim 45 wherein each building has metallic equipment that is grounded to the ground ring.

48. An antenna tower and support apparatus, comprising:

- 20 a) a foundation;
- b) a multistory building mounted on the foundation, the building including a plurality of vertically spaced apart building sections that include at least a bottom building section positioned next to the foundation and a top building section,
- 25 c) a plurality of load bearing columns that span vertically from the bottom section to the top section;
- d) a tower supported upon the top section of the building;
- e) a plurality of antennas attached to the tower at multiple elevational positions;
- 30 f) each building section defining a separate floor of the multistory building, a plurality of the building sections each having a security area that is separate from the security area of other building sections;

g) antenna portals provided on a plurality of the building sections;
h) a plurality of antenna cables, an antenna cable extending from an antenna to a security area of a building section via an antenna portal for a plurality of the building sections; and

5 i) a plurality of the security areas having telecommunication equipment that is connected to on of said antenna cables.

49. The antenna tower and support apparatus of claim 48 wherein the columns each comprise connected together vertical column sections.

50. The antenna tower and support apparatus of claim 48 wherein the tower
10 has tower legs, each leg of the tower supported by a column.